

AMENDMENTS TO THE CLAIMS

Please amend the present application as follows:

Claims

1. (Currently amended) A module, comprising:

a substrate having a first side and a second side, the substrate defining one or more holes from the first side to the second side, the substrate additionally defining a recess located about the hole on the second side; and

a plastic member for mounting to the first side of the substrate, the plastic member comprising a thermoplastic heat stake having a shaped tip selected such that when reformed using heat, the thermoplastic material of the shaped tip forms [[a]] an irregularly shaped lump occupying a volume that is smaller than that is confined inside the recess of the substrate.

2. (Currently amended) A method of forming a surface mount module, the method comprising:

providing a substrate having a first side and a second side;

providing a hole in the substrate from the first side to the second side;

providing a recess about the hole on the second side;

providing a plastic member having a thermoplastic heat stake;

mounting the plastic member on the first side of the substrate, the mounting comprising insertion of the thermoplastic heat stake into the hole in the substrate; and

heating a shaped tip of the thermoplastic heat stake whereby the thermoplastic material of the shaped tip is melted and to form a lump having an irregular shape that is confined inside the recess of the substrate without extending up to a level corresponding to the planar surface of the second side, thereby allowing surface mounting of the surface mount module using the planar surface of the second side without additional rework being carried out upon the lump.

3. (Previously presented) The module of claim 1, wherein the substrate is a printed circuit board (PCB) and the second side of the PCB is substantially planar for configuring the module as a surface mount module.

4. (Previously presented) The module of claim 1, wherein the shaped tip is a barbed tip.

5. (Withdrawn) The module of claim 1, wherein the shaped tip is a tapered tip.
6. (Withdrawn) The module of claim 1, wherein the shaped tip is a straight tip.
7. (Previously presented) The module of claim 1, wherein the recess is a V-shaped recess.
8. (Withdrawn) The module of claim 1, wherein the recess is a U-shaped recess.
9. (Withdrawn) The module of claim 1, wherein the recess comprises a first portion having straight sides and a second portion that is V-shaped.
10. (Withdrawn) The module of claim 1, wherein the recess has a stepped cross section.
11. (Previously presented) The method of claim 2, further comprising:
mounting the surface mount module upon a printed circuit board (PCB) using surface mounting techniques.
12. (Previously presented) The method of claim 2, wherein the shaped tip is selected to have a volume whereby when heated the thermoplastic material of the shaped tip is deformed and confined inside the recess of the substrate.
13. (Currently amended) A module, comprising:
a substrate having a mounting hole extending from a first surface to a second surface, the mounting hole further defined by a recess located in the second surface; and
a component that is mountable upon the first surface of the substrate, the component comprising a thermoplastic heat stake configured for insertion into the mounting hole in the substrate, the thermoplastic heat stake having a tip with a material volume that is selected for deforming under heat to produce [[a]] an irregularly shaped lump that is located, at least in part, wholly inside the recess and substantially below the plane of the second surface, thereby is operative to securing the component to the substrate and allowing surface mounting of the module using the second surface.

14. (Currently amended) The module of claim 13, wherein the material volume is selected such that the lump is wholly confined inside the recess without requiring removal of a portion of the material after application of the heat.
15. (Currently amended) The module of claim 14, wherein the second surface is substantially planar ~~with the lump wholly confined inside the recess~~ so as to provide surface mounting capability to the module.
16. (Previously presented) The module of claim 15, wherein the substrate and the component are parts of an electronic display.
17. (Previously presented) The module of claim 13, wherein the component is at least one of a) a light diffusing element or b) a reflector for reflecting light from a light source mounted on the substrate.
18. (Previously presented) The module of claim 17, wherein the light diffusing element is a plastic light diffusing element.
19. (Previously presented) The module of claim 13, wherein the substrate is a printed circuit board (PCB).
20. (Previously presented) The module of claim 19, wherein the PCB has a thickness approximately 1.6 mm.